

ABSTRACT OF THE DISCLOSURE

Recombinant cells which express a fluorescent holo-phytycobiliprotein fusion protein and methods of use are described. The cells comprises a bilin, a recombinant bilin reductase, an apo-phytycobiliprotein fusion protein precursor of the fusion protein comprising a
5 corresponding apo-phytycobiliprotein domain, and a recombinant phytycobiliprotein domain-bilin lyase, which components react to form the holo-phytycobiliprotein fusion protein. Also described are holo-phytycobiliprotein based transcription reporter cells and assays, which cells conditionally express a heterologous-to-the-cell, fluorescent, first holo-phytycobiliprotein domain.

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